

Claims

Sub 1. Valve for an aerosol container, the valve comprising a valve body; a valve stem having a dispensing passage, and contacting said valve stem, a sealing ring including a sealing portion; the valve stem being slidably movable relative to the sealing ring from a valve-closed position to a valve-open position in which the interior of the valve body is in communication with the dispensing passage, wherein the sealing ring further includes a wiper to wipe the valve stem.

2. Valve according to claim 1, wherein the valve body has a metering chamber, a sampling chamber and therebetween is provided a second sealing ring, including a sealing portion, within which the stem is slidably movable, the valve stem having a transfer passage such that in the valve-closed position the dispensing passage is isolated from the metering chamber and the metering chamber is in communication with the sampling chamber via said transfer passage, and in the valve-open position the dispensing passage is in communication with the metering chamber and the transfer passage is isolated from the metering chamber, wherein the second sealing ring further includes a wiper to wipe the valve stem.

3. Valve according to either of claims 1 or 2 wherein the wiper is an integral part of the sealing ring or second sealing ring.

4. Valve according to any of claims 1 to 3 wherein the wiper of the sealing ring or second sealing ring is in curved contact with the valve stem.

5. Valve according to any of claims 1 to 4 wherein there is an enclosed space between the wiper, the sealing portion and the seal-receiving part of the valve stem.

6. Valve according to any of claims 1 to 5 wherein the stem-receiving parts of the seal and wiper have square cut edges.

7. Valve according to any of claims 1 to 5 wherein the stem-receiving parts of the seal and wiper have rounded edges.

8. Valve according to any of claims 1 to 5 wherein the stem-receiving part of the wiper is pointed.

9. Valve according to any of claims 1 to 8 wherein the seal and wiper are spaced by a layer of supporting rigid material.

10. Valve according to claim 9 wherein said rigid material is selected from the group consisting of polybutylteraphthlate, polyoxymethylene, a metal and nylon.

11. Valve according to any of claims 1 to 10 wherein the stem receiving part of the seal is lobed.

12. Valve according to any of claims 1 to 11 additionally comprising a second wiper.

13. Valve according to any of claims 1 to 12, wherein the sealing ring and/or second sealing ring is formable by a moulding process.

14. Valve according to claim 13 wherein the moulding process is compression moulding or injection moulding.

15. Valve according to any of claims 1 to 14, wherein the sealing ring, second sealing ring and wiper are formed from an elastomeric material.

16. Valve according to claim 15 wherein said elastomeric material is selected from the group consisting of:

- (a) a thermoplastic elastomer comprising a copolymer of about 80 to about 95 percent ethylene and a total of about 5 to about 20 percent mole percent of one or more of 1-butene, 1-hexene and 1-octene;
- (b) a styrene-ethylene/butylene-styrene block copolymer;
- (c) an ethylene propylene diene rubber (EPDM);
- (d) a thermoplastic elastomer blend of EPDM dispersed in a polypropylene or polyethylene matrix;
- (e) a butyl polyethylene;
- (f) butyl-polypropylene; and any mixtures thereof.

17. Valve according to any of claims 1 to 16, wherein the sealing ring and/or second sealing ring is not movable relative to the valve body.

18. Valve according to claim 17, wherein the sealing ring and/or second sealing ring is held within a cavity in the valve body.

19. Valve according to any of claims 1 to 18, wherein the stem comprises lubricant material.

20. Valve according to any of claims 1 to 19 wherein the sealing ring and/or second sealing ring comprises lubricant material.

21. Aerosol container comprising a valve according to any of claims 1 to 20.

22. Aerosol container according to claim 21 comprising a suspension of a medicament in a propellant.

23. Aerosol container according to claim 22, wherein, the propellant is liquefied HFA134a or HFA-227 and mixtures thereof.

24. Aerosol container according to either of claims 22 or 23, wherein the medicament is selected from the group consisting of albuterol, salmeterol, fluticasone propionate, beclomethasone dipropionate, salts or solvates thereof and any combination thereof.

25. Aerosol container according to claim 24 wherein said combination comprises salmeterol xinafoate and fluticasone propionate.

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